TEST CASE DOCUMENT

Fake News Detection using Social Media Data

(TCS iON – Industry Project)

By
Mohammed Irfan Shajil .P
Campus ID: 30111
Registration Number: 23BBCACD287

Department of Computer Science
The Yenepoya Institute of Arts, Science, Commerce and Management
A Constituent Unit of Yenepoya (Deemed to be University)
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1. Overview

This document contains detailed test cases for validating the Fake News Detection system. Each test case defines steps, test data, expected results, and pre-requisites.

2. Application / Screen

Model Frontend – News Classification (Streamlit Web Interface)

3. Test Cases

Test Case ID: TC_01

- Test Case Description: Verify classification of real news
- Test Step #1: Enter real news text
- Test Step #2: Click Analyze
- Test Step #3: View result
- Test Data: Real news article
- Expected Result: “Likely Real News” with confidence ≥ 0.90
- Pre-Requisites: Model and vectorizer loaded

Test Case ID: TC_02

- Test Case Description: Verify classification of fake news
- Test Steps: Enter fake news → Analyze
- Test Data: Fake or misleading news content
- Expected Result: “Likely Fake News” with confidence ≥ 0.90
- Pre-Requisites: Trained model available

Test Case ID: TC_03

- Test Case Description: Verify invalid input handling
- Test Data: Very short or empty input
- Expected Result: Validation warning shown and prediction blocked

Test Case ID: TC_04

- Test Case Description: Verify ambiguous input handling
- Test Data: Neutral or mixed-signal news
- Expected Result: “Inconclusive” result

Test Case ID: TC_05

- Test Case Description: Verify frontend-backend integration
- Test Data: Valid news text
- Expected Result: Prediction displayed correctly without errors

4. Summary

These test cases validate correct system behavior for valid, invalid, ambiguous, and integration-related scenarios.